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10/589,267	08/14/2006	Katsutoshi Sato	294929US8PCT	6043
22850 7590 09/05/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER FISCHER, MARK L				
ART UNIT		PAPER NUMBER		
2627				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/589,267

Applicant(s)

SATO, KATSUTOSHI

Examiner

MARK FISCHER

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-08)
- Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claims 6 and 12 are objected to because of the following informalities: In Claim 2 (line 2) and Claim 8 (line 2), "comatic aberration correcting means" should be changed to --aberration correcting means-- in order to match the terminology used in their parent claims: Claim 1 (fifth to last line) and Claim 7 (fifth to last line), respectively. In claims 6 (line 2), Claim 12 (line 2), and Claim 14 (line 2), "means is liquid" should be changed to --means is a liquid--. In Claim 7 (line 5), "rotation" should be changed to --rotational-- in order to match the terminology used within the claim, mainly in Claim 7 (line2). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (third and second to last lines), Claim 7 (third and second to last lines) and Claim 13 (twelfth and eleventh to last lines) recite the limitation “comatic aberration *in the other direction* of the radial tilt direction and the tangential tilt direction.” The use of the limitation “in the other direction” is not clear because it can be interpreted two ways: (1) It may be interpreted that if the object lens drive unit displaces the bobbin in a radial tilt direction, then “in the other direction” refers to the tangential tilt direction. (2) It may be interpreted that if the object drive unit displaces the bobbin in a clockwise radial tilt direction, then “in the other direction” refers to a counterclockwise radial tilt direction.

Claims 1 (line 13), Claim 7 (line 15), and Claim 13 (line 14) recite the limitation “either one of light beams” which is unclear because there are three light beams claimed, but the term “either” suggests that there are only two light beams.

Claim 1 (line 11) recites the limitation “the optical disc.” There is insufficient antecedent basis for this limitation in the claim.

Claims 2 and 8 recite the limitation “changing refractive index of light beams” which is unclear because refractive indices are only present in materials, and are not present in light.

Additionally, Claims 3-6 and 9-12 are rejected for their dependence on parent claims 1 and 7.

Claim 14 is confusing because it first claims that the aberration correcting means “is a liquid crystal correcting device” and then further claims that the aberration correcting means “serves to apply a voltage to the liquid crystal correcting device.” As claimed, this means that the liquid crystal correcting device serves to apply a voltage to itself, which does not make sense.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3, 4, 7, 9, 10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (US Pub. No. 2004/0114495 A1).

Regarding claim 1, Kim et al. discloses an optical pick-up device (Fig. 2) comprising: a first light emitting element (11) for emitting light beams (11a) having a first wavelength; a second light emitting element (20) for emitting light beams (21a) having a second wavelength; a third light emitting element (30) for emitting light beams (31a) having a third wavelength; a first optical system including a first object lens (45), and serving to converge, by the first object lens, either one of light beams which have been emitted from the first to third light emitting elements to irradiate the light beams thus converged onto the optical disc (see Fig. 3); a second optical system including a second object lens (41), and serving to converge, by the second object lens,

either one of light beams which have been emitted from the first to third light emitting elements to allow the light beams thus converged to be incident on the optical disc (see Fig. 3); an object lens drive unit (Fig. 3, element 40) including a bobbin (50) for holding the first and second object lenses, and serving to allow the bobbin to undergo drive displacement in three axes directions of a focusing direction which is a direction perpendicular to the recording surface of the optical disc, a tracking direction which is a substantially radial direction of the optical disc, and either one of a radial tilt direction in which movement is performed in a circular arc form on the axis of the radial direction and a tangential tilt direction in which movement is performed in a circular arc form on the axis of a tangential direction which is a direction perpendicular to the radial direction (§ [0130]); and aberration correcting means for correcting comatic aberration of the second optical system relatively taking place with respect to the first optical system in which comatic aberration in the other direction of the radial tilt direction and the tangential tilt direction, which is not controlled by the object lens drive unit, is corrected (§ [0118], [0119], [0192] and [0193]).

Regarding claim 3, Kim et al. discloses that the first wavelength is about 405 nm (§ [0089]), the second wavelength is about 660 nm (§ [0092]), and the third wavelength is about 785 nm (§ [0093]).

Regarding claim 4, Kim et al. discloses that (see Fig. 2) light beams having the first wavelength (11a) are incident on the first object lens (45), and light beams having the second (21a) and third (31a) wavelengths are incident on the second object lens (41).

Regarding claim 7, Kim et al. discloses an optical disc apparatus (Fig. 2) comprising; disc rotational operation means (19) for performing rotational operation of an optical disc; and an

optical pick-up device (Fig. 2) for scanning, by light beams, the signal recording surface of the optical disc operated by the disc rotation operation means to perform recording or reproduction of information, the optical pick-up device comprising: see rejection of claim 1.

Regarding claim 9, Kim et al. discloses that the first wavelength is about 405 nm (¶ [0089]), the second wavelength is about 660 nm (¶ [0092]), and the third wavelength is about 785 nm (¶ [0093]).

Regarding claim 10, Kim et al. discloses that (see Fig. 2) light beams having the first wavelength (11a) are incident on the first object lens (45), and light beams having the second (21a) and third (31a) wavelengths are incident on the second object lens (41).

Regarding claim 13, see the rejection of claim 1 and also note that Kim et al. discloses a method of controlling an optical pick-up device, the control method comprising: allowing the bobbin to undergo drive displacement on the basis of control signals in the focus direction and in the tracking direction, and a control signal in either one direction of the radial tilt direction and the tangential tilt direction to control positions and attitudes with respect to the optical disc of the first and second object lenses which have been held on the bobbin; and correcting comatic aberration of the second optical system by the aberration correcting means (¶¶ [0118] and [0119]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 2, 6, 8, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Pub. No. 2004/0114495 A1) in view of Ogasawara (US Pat. No. 6,141,304).

Regarding claim 2, Kim et al. does not explicitly disclose that the comatic aberration correcting means corrects comatic aberration by changing refractive index of light beams transmitted therethrough. However, Ogasawara discloses a comatic aberration correcting means that corrects comatic aberration by changing refractive index of light beams transmitted therethrough (Col. 7, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Ogasawara with the motivation to substitute the comatic aberration correcting means of Kim et al. with another well-known comatic aberration correcting means.

Regarding claim 6, Kim et al. does not explicitly disclose that the aberration correcting means is a liquid crystal correcting device. However, Ogasawara discloses a liquid crystal correcting device as a well-known aberration correcting means (Col. 7, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Ogasawara with the motivation to substitute the

comatic aberration correcting means of Kim et al. with another well-known comatic aberration correcting means.

Regarding claim 8, Kim et al. does not explicitly disclose that the comatic aberration correcting means changes refractive index of light beams transmitted therethrough to thereby correct comatic aberration. However, Ogasawara discloses a comatic aberration correcting means that corrects comatic aberration by changing refractive index of light beams transmitted therethrough (Col. 7, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Ogasawara with the motivation to substitute the comatic aberration correcting means of Kim et al. with another well-known comatic aberration correcting means.

Regarding claim 12, Kim et al. does not explicitly disclose that the aberration correcting means is a liquid crystal correcting device. However, Ogasawara discloses a liquid crystal correcting device as a well-known aberration correcting means (Col. 7, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Ogasawara with the motivation to substitute the comatic aberration correcting means of Kim et al. with another well-known comatic aberration correcting means.

Regarding claim 14, Kim et al. does not explicitly disclose that the aberration correcting means is a liquid crystal correcting device, and serves to apply a voltage to the liquid crystal correcting device to control refractive index to correct comatic aberration. However, Ogasawara discloses an aberration correcting means that is a liquid crystal correcting device, and serves to apply a voltage to the liquid crystal correcting device to control refractive index to correct

comatic aberration (Abstract and Col. 7, lines 59-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Ogasawara with the motivation to substitute the comatic aberration correcting means of Kim et al. with another well-known comatic aberration correcting means.

11. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Pub. No. 2004/0114495 A1) in view of Kanaya et al. (US Pub. No. 2006/0077784 A1).

Regarding claim 5, Kim et al. discloses that the first and second object lenses are held at the bobbin in the state arranged in the radial direction (see Fig. 6), but does not disclose that the first and second object lenses are held at the bobbin in the state arranged in the tangential direction. However, Kanaya et al. discloses arranging first and second object lenses in a tangential direction (see Fig. 4B). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Kanaya et al. with the motivation to allow the objective lens disposed on the outer side to access a region of a disk at the innermost periphery (§ [0008]).

Regarding claim 11, Kim et al. discloses that the first and second object lenses are held at the bobbin in the state arranged in the radial direction (see Fig. 6), but does not disclose that the first and second object lenses are held at the bobbin in the state arranged in the tangential direction. However, Kanaya et al. discloses arranging first and second object lenses in a tangential direction (see Fig. 4B). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kim et al. with Kanaya et al.

with the motivation to allow the objective lens disposed on the outer side to access a region of a disk at the innermost periphery (§ [0008]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK FISCHER whose telephone number is (571) 270-3549. The examiner can normally be reached on Monday-Friday from 9:00AM to 6:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2627
8/26/2008

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